

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

DOCKET NO. 63469

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Inventor(s): Douglas W. Carr and Lawrence P. Head

Patent Application No.: 10/007,604

Examiner:

Filing Date: November 7, 2001

Group Art Unit:

Title: BULLET FOR OPTIMAL PENETRATION AND EXPANSION

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AFFIDAVIT LAWRENCE P. HEAD

STATE OF Minnesota                    )  
  ) ss  
COUNTY OF Isanti                    )

I, Lawrence P. Head, being first duly sworn under oath, hereby depose and say as follows:

1. My name is Lawrence P. Head. I am 41 years old and am an employee of Federal Cartridge Company (hereinafter "FEDERAL"), 900 Ehlen Drive, Anoka, Minnesota 55303-7501.

I am one of the two (2) inventors of U.S. Patent Application entitled "BULLET FOR OPTIMAL PENETRATION AND EXPANSION", Serial No. 10/007,604, filed by Douglas W. Carr and me on November 7, 2001. I reside at 3238 318th Avenue NW, Cambridge, Minnesota 55008.

2. I hold a Bachelor of Mechanical Engineering degree, issued by the University of Minnesota in December, 1984. I also completed one year of post-graduate engineering work at that University.

3. I was employed by Honeywell in 1986 as a Development Engineer in precision-guided weapons and worked thereupon until October 1, 1990, at which time I became employed by Alliant Techsystems, Inc., when it spun off Honeywell. I have since worked at Alliant Techsystems, Inc., as Development Engineer on several precision-guided weapon systems. In June, 1997 I was promoted to Senior Development Engineer and in the year 2000, to Principal

**EXHIBIT 2**

Development Engineer, a position which I currently hold. Federal Cartridge Company, the assignee of our above patent application, is now owned by Alliant Techsystems, Inc.

4. I have been asked by Mr. Everett J. Schroeder, our counsel, to carefully review the patent application filed by Douglas W. Carr and myself under the title "BULLET FOR OPTIMAL EXPANSION AND PENETRATION". I understand this application was filed November 7, 2001 in the United States Patent and Trademark Office under Serial No. 10/007,604.

5. I understand that there is a legal requirement under the U.S. Patent Laws which requires that the specification of a patent application be written carefully in such clear and exact terms as to enable any person skilled in the art to which the alleged invention pertains or with which it is most nearly connected, to make and use the same.

6. I have carefully reviewed the specification of our above application. I understand that the U.S. Patent Office has stated that the specification of the above application fails to disclose how the segments of the metal core can be created, and that therefore we are not entitled to receive a U.S. patent thereon. It has been my experience that the specification and drawings of the above patent application are sufficiently clear so that any person skilled in the applicable art will readily understand, upon reading the above patent application, that the segments comprising the metal core can be made, prior to their swaging, by utilizing a punch and die procedure which is commonly used in the manufacture of lead cores for bullets. It is my experience and opinion that forming shapes in lead cores and bullets using a punch and die procedure are well-known and practiced throughout the industry of bullet-making by a very high percentage of the men considered to be skilled in the art of bullet making. As a consequence, in my opinion any man skilled in the art of making bullets would have no difficulty with practicing the invention described and claimed in the above patent application, after considering our above application. The punch

and die methods are extremely well-known and utilized by most men skilled in the art of bullet making. Consequently, I am confident that any man skilled in the art, upon reading the above pending application, would readily utilize the punch and die method to make the core segments of the bullet described in the above patent application without any difficulty.

7. The core segments are described in page 6 of the specification and are shown in Figs. 7 and 4 to be wedge-shaped in cross section and initially spaced from each other. As described in the specification, the wedge-shaped core segments are swaged into conforming, direct, but not interlocking, contact with each other. As a consequence, they retain some of their individualistic features and will separate along their conforming exterior surfaces when their forward ends strike a target.

8. Because it is so commonly known in the bullet-making art that bullet core shapes are generally produced by the punch and die methods, I would strongly anticipate that anyone skilled in the art of making lead bullet cores would resort to such punch and die methods in order to make and use the bullet shown and described in our above application for patent.

9. Also, because it is so commonly known, Mr. Carr and I did not mention the use of the punch and die methods in our disclosure of the invention to Mr. Schroeder, but only indicated that the segments were "formed." He, in turn, has used that term throughout the specification and claims of the above patent application.

10. In view of the fact that the skilled man in the art of bullet making is well aware of the fact that lead bullet cores shapes are commonly manufactured through the use of punch and die methods, and has in all likelihood used said methods in making bullet cores, in my opinion the specification and drawings of the above application clearly enable him to make and use said bullets as described therein.

FURTHER AFFIANT SAYETH NOT.

Lawrence P. Head  
Lawrence P. Head

Subscribed and sworn to before me, a Notary Public, this 11 day of June, 2003.

David S. Head  
Notary Public